

State of New Jersey  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
DIVISION OF HAZARDOUS SITE MITIGATION  
CN 028, Trenton, N.J. 08625  
609 - 984 - 2902

RICHARD C. SALKIE, P.E.  
ACTING DIRECTOR

19 AUG 1986

Janet Feldstein, Project Officer  
USEPA Region II 7th Floor  
Emergency & Remedial Response - Enforcement  
26 Federal Plaza  
New York, NY 10278

RE: SCP Carlstadt RI/FS Geological Comments

Dear Ms. Feldstein:

Listed below are comments prepared by Robert Gallagher, a geologists for NJDEP, for the Remedial Investigation of the SCP Carlstadt site.

1. Grouts- The Dames & Moore report specifies that a bentonite grout will be used in the installation of wells, in addition the following grouts are also acceptable:
  - a) Cement and 5% Bentonite - max of 8 gals of potable water per 94 lb. bag of bentonite (5%)
  - b) Cement and 10% Bentonite - max. of 10 gals potable water per 94 lb. bag of bentonite (10%)
  - c) Neat Cement - max. of 6 gals of potable water for 94 lb. bag of bentonite
2. Piezometers - The installation of any piezometer must be performed by a licensed driller, and permits from NJDEP - DWR must be obtained. This is in accordance with current State regulations.
3. Double Cased Wells - The proposed specifications indicate that the deep wells will penetrate a substantial clay layer, and be screened either in underlying sands or the shale. These deep wells must be installed as double cased wells in accordance with the well specifications provided by NJDEP - DWR (Refer to the attachment). The outer casing should be 8 inches in diameter, and should penetrate the clay formation by 3 to 5 feet. This outer casing should extend above the ground surface to serve as the locking, riser pipe.
4. Well locations - The well locations proposed by Dames & Moore are not acceptable to the NJDEP Geological Survey. Many of the wells will be installed upgradient from the source of contamination, and will not provide

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useful data regarding the concentration of contaminants in the groundwater, or the quality of the groundwater leaving the site. For these reasons the DWR geologist recommends that the well locations for MW 7S and 7D, and 3S be located downgradient from the waste lagoon and tank farm respectively. Refer to the attached site map for further details.

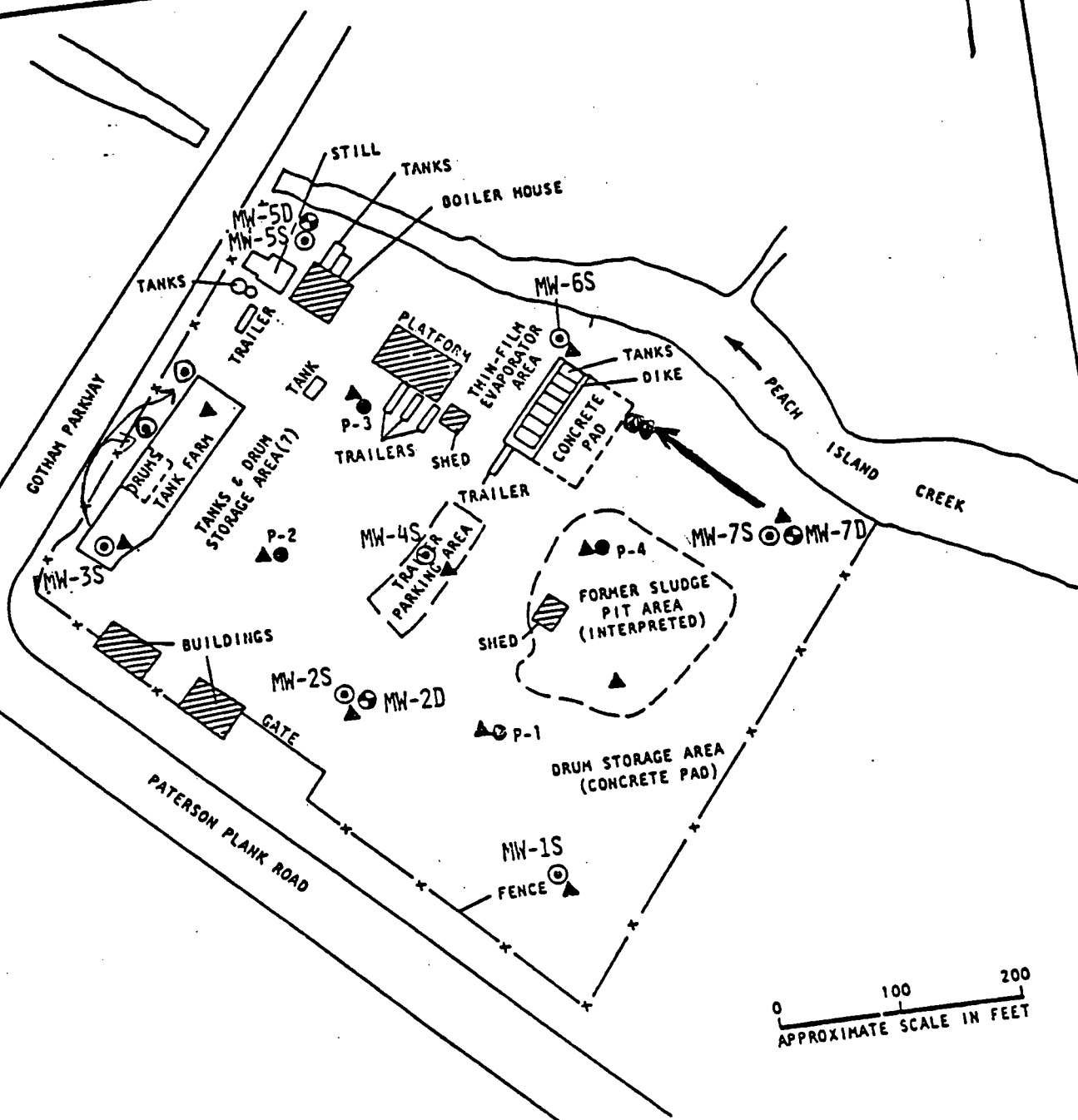
These recommendations are consistent with comments previously provided by NJDEP. If you have any questions please contact my office at 609-984-3074, or the geologist, Robert Gallagher at 609-292-0688. Thank you.

Sincerely,  
  
Christine Altomari,  
Site Manager

HS54:ca

c: Robert Gallagher, DWR  
Tom McNevin, BEERA  
Robert Soboleski, BECM

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- NOTES:
1. ALL DRUMS, MOST TANKS AND TANK TRAILERS HAVE BEEN REMOVED AND SOME FACILITIES HAVE BEEN DISMANTLED SINCE OPERATIONS CEASED IN 1979.
  2. BASE MAP REFERENCE: AERIAL PHOTOGRAPH NO. 3818-6-35, MARCH 27, 1984. SCALE: 1" = 100'±
  3. TWO ADDITIONAL SOIL SAMPLING LOCATIONS TO BE SELECTED IN THE FIELD.

## PROPOSED SOIL AND GROUNDWATER SAMPLING LOCATIONS

- KEY:
- MW-1S ● SHALLOW MONITORING WELL
  - MW-2D ● DEEP MONITORING WELL
  - P-1 ● SHALLOW PIEZOMETER
  - ▲ SHALLOW BORING OR TEST PIT FOR SOIL SAMPLING

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DAMES & MOORE

FIGURE 7-1

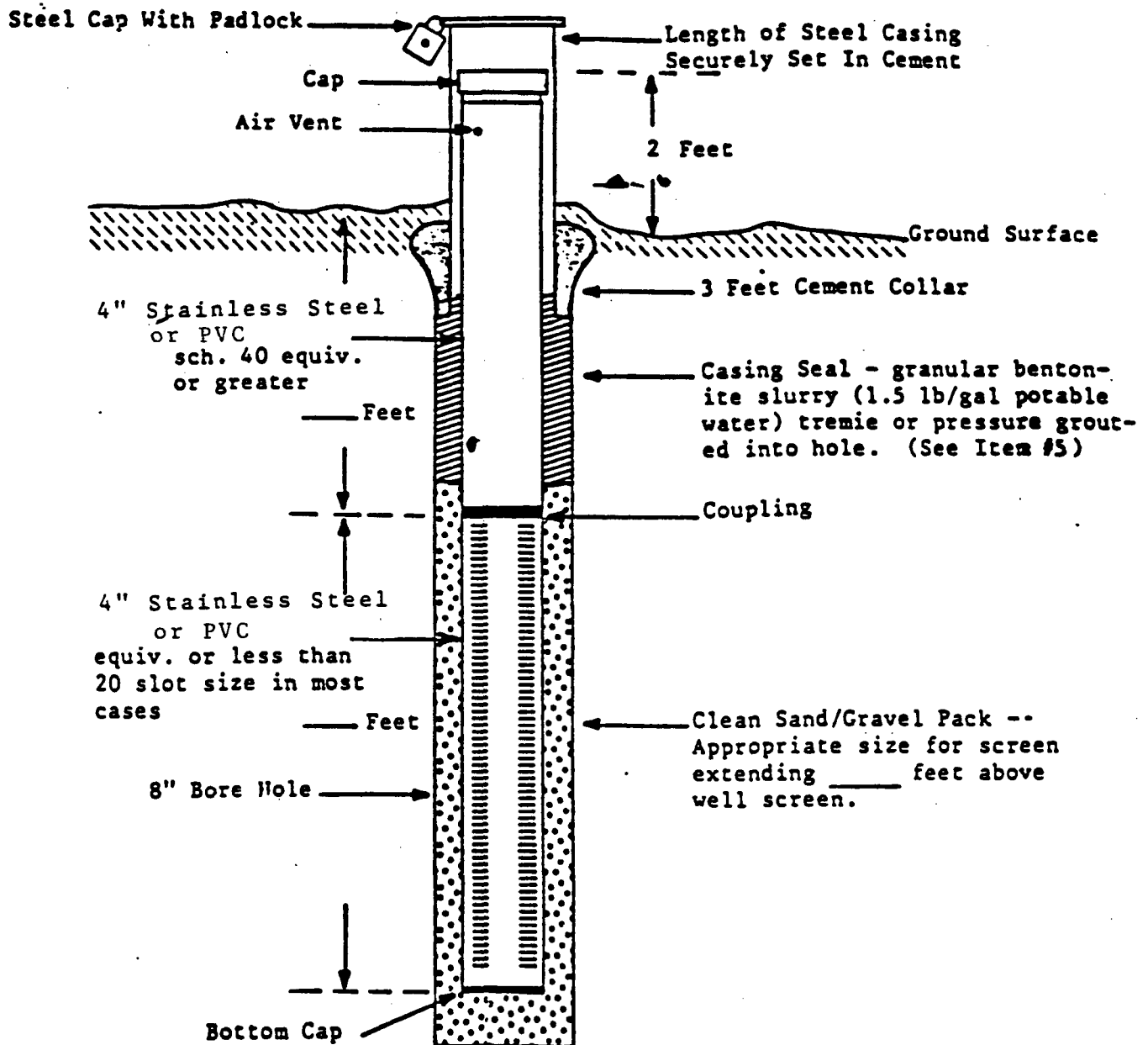
# New Jersey Department of Environmental Protection Unconsolidated Monitor Well Specifications\*

Site Name: \_\_\_\_\_

ATTACHMENT III-E

Location: \_\_\_\_\_

Date: \_\_\_\_\_



NOT TO SCALE

## REQUIREMENTS:

1. Notification to the NJDEP is required two (2) weeks prior to drilling.
2. State well permits are required for each monitor well constructed by the driller. Report "use of well" on well permit application. Permit number must be permanently affixed to each monitor well.

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3. The borehole must be a minimum of four (4) inches greater than the casing diameter.
4. Wells must be gravel packed unless noted otherwise in Additional Requirement #8.
5. Approved high grade sodium base, well sealant type, granular bentonite must be used to seal casing. Casing sealant and drilling fluids must be mixed with potable water.
6. All wells must be developed upon completion for a minimum of one (1) hour or to yield a turbid-free discharge.
7. The driller must maintain an accurate written log of all materials encountered in each hole, record all construction details for each well, the static water levels, and any tidal fluctuations (when applicable). This information must be submitted to the Office of Water Allocation as required by N.J.S.A. 58:4A.
8. If low level organic compounds are to be sampled for, only threaded or press joints (no glue joints) are acceptable.
9. A length of steel casing with a locking cap must be securely set in cement a minimum of three (3) feet below ground surface.
10. Top of the casing (excluding cap) must be surveyed to the nearest hundredth foot (0.01) by a licensed surveyor. The casing must be permanently marked at the point surveyed. The well(s) should be numbered clearly on the casing. A detailed site map with the well locations and casing elevations must be submitted to \_\_\_\_\_

11. NOTICE IS HEREBY GIVEN OF THE FOLLOWING:

- a. Review by the Department of well locations and depths is limited solely to review for compliance with the law and Department rules;
- b. The Department does not review well locations or depths to ascertain the presence of, nor the potential for, damage to any pipeline, cable or other structure;
- c. The permittee (applicant) is solely responsible for safety and adequacy of the design and construction of wells required to be constructed by the Department;
- d. The permittee (applicant) is solely responsible for any harm or damage to person or property which results from the construction or maintenance of any well; this provision is not intended to relieve third parties of any liabilities or responsibilities which are legally theirs.

ADDITIONAL REQUIREMENTS (IF CHECKED):

- ☐ 1. Top of screen set \_\_\_\_\_ feet above/below water table.
- ☐ 2. Split Spoon Samples \_\_\_\_\_
- ☐ 3. Dedicated Bailer (Sampler) In Well(s) \_\_\_\_\_
- ☐ 4. Threaded or Press Joints \_\_\_\_\_
- ☐ 5. Five (5) Foot Casing Tailpiece Below Screen \_\_\_\_\_
- ☐ 6. Centralizers On Screen \_\_\_\_\_
- ☐ 7. Borehole Geophysical Log(s) \_\_\_\_\_
- ☐ 8. Other \_\_\_\_\_

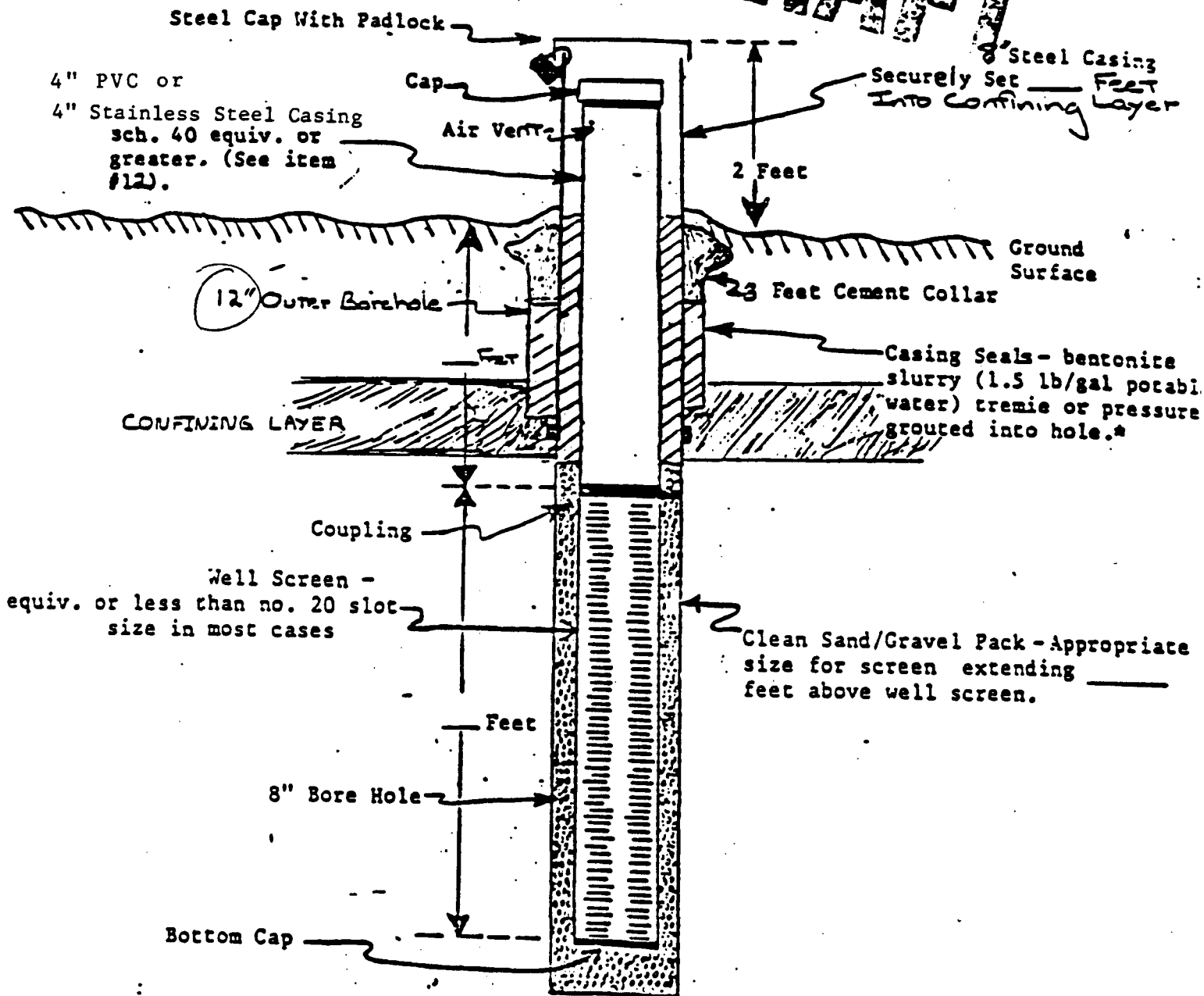
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\* OTHER MATERIALS, DESIGNS AND CASING DIAMETERS MAY BE USED WITH PRIOR APPROVAL BY THE NJDEP.

ATTACHMENT III  
NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION  
UNCONSOLIDATED MONITOR WELL SPECIFICATIONS FOR  
CONFINED AQUIFERS

SITE NAME: \_\_\_\_\_  
LOCATION: \_\_\_\_\_  
DATE: \_\_\_\_\_

**DRAFT**



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**REQUIREMENTS:**

NOT TO SCALE

- Notification to the NJDEP is required two (2) weeks prior to drilling.

3. Outer steel casing must be securely set and grouted into the confining layer (depth field determined unless specified in diagram) before drilling continues through that layer.
4. Wells must be gravel packed (when necessary). well sealant type, granular
- \*5. Approved high grade sodium base bentonite must be used to seal casings. Casing sealant and
6. All wells must be developed upon completion for a minimum of one (1) hour to yield fluids, in a turbid-free discharge. <sup>drilling</sup> be mixed with water
7. The driller must maintain an accurate written log of all materials encountered in each hole, record all construction details for each well, the static water levels, and any tidal fluctuations (when applicable).
8. If low level organic compounds are to be sampled for, only threaded or press joints (no glue joints) are acceptable.
9. Cement collar must be installed a minimum of one (1) hour after outer casing sealant has been employed.
10. Locking caps on outer casing must be provided to secure each well.
11. Top of the casing (excluding cap) must be surveyed to the nearest hundredth foot (0.01) by a licensed surveyor. The casing must be permanently marked at the point surveyed. The well(s) should be numbered clearly on the casing. A site map with the well locations and casing elevations must be submitted to NJ Geologic Sur
12. Other materials, designs and casing diameters may be used with prior approval by the NJDEP.
13. NOTICE IS HEREBY GIVEN OF THE FOLLOWING:

- a. Review by the department of well locations and depths is limited solely to review for compliance with the law and department rules;
- b. The department does not review well locations or depths to ascertain the presence of, nor the potential for, damage to any pipeline, cable or other structure;
- c. The permittee (applicant) is solely responsible for safety and adequacy of the design and construction of wells required to be constructed by the department;
- d. The permittee (applicant) is solely responsible for any harm or damage to person or property which results from the construction or maintenance of any well; this provision is not intended to relieve third parties of any liabilities or responsibilities which are legally theirs.

ADDITIONAL REQUIREMENTS (IF CHECKED):

1. ☐ Top of screen set \_\_\_\_\_ feet above/below water table.
2. ☒ Split Spoon Samples \_\_\_\_\_ at every 5 ft. or change in lithology
3. ☐ Dedicated Bailer (Sampler) In Well(s) \_\_\_\_\_
4. ☒ Threaded or Press Joints \_\_\_\_\_ NO glued joints!
5. ☐ Five (5) Foot Casing Tailpiece Below Screen \_\_\_\_\_
6. ☐ Centralizers On Screen \_\_\_\_\_
7. ☐ Borehole Geophysical Log(s) \_\_\_\_\_
8. ☐ Other \_\_\_\_\_

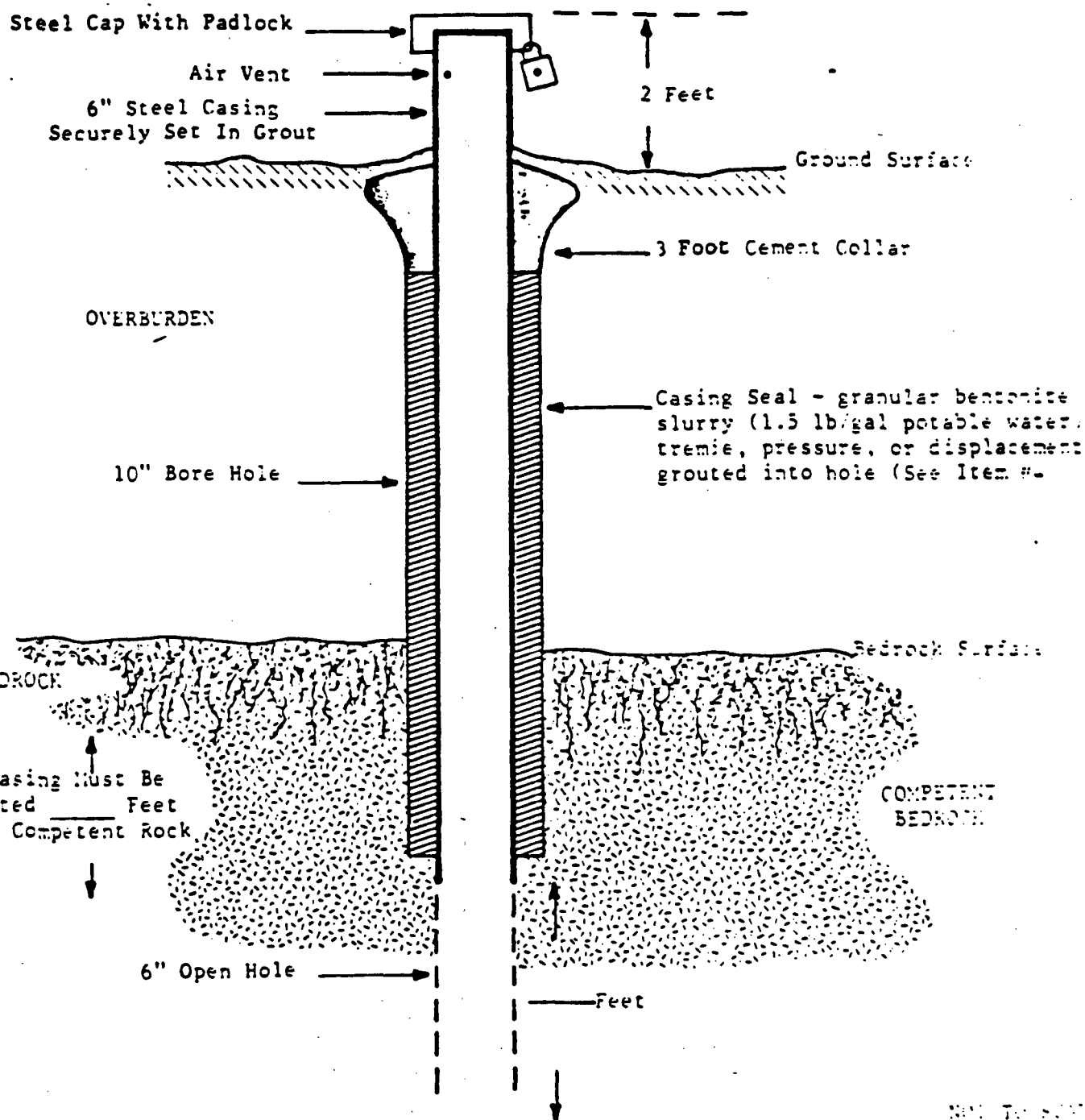
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# New Jersey Department of Environmental Protection Rock Monitor Well Specifications\*

Site Name: \_\_\_\_\_

Location: \_\_\_\_\_

Date: \_\_\_\_\_



## REQUIREMENTS:

1. Notification to the NJDEP is required two (2) weeks prior to drilling.
2. State well permits are required for each monitor well constructed by the driller. Report "use of well" on well permit application. Permit number must be permanently affixed to each monitor well.

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3. Oversize borehole, minimum four (4) inches greater than casing diameter drilled through overburden and casing sealed ten (10) feet into competent rock unless shown otherwise above.
4. Approved high grade sodium base, well sealant type, granular bentonite must be used to seal casing. Casing sealant and drilling fluids must be mixed with potable water.
5. Well must be developed upon completion for a minimum of one (1) hour or to yield a turbid-free discharge.
6. The driller must maintain an accurate written log of all materials encountered in each hole, record all construction details for each well, and record the depth of major water bearing fracture zones. This information must be submitted to the Office of Water Allocation as required by N.J.S.A. 58:4A.
7. Cement collar must be installed a minimum of one (1) hour after casing seal has been emplaced.
8. Locking caps must be provided to secure each well.
9. Top of each well casing (excluding cap) must be surveyed to the nearest hundredth foot (0.01) by a licensed surveyor. The casing must be permanently marked at the point surveyed. The well should be numbered clearly on the casing. A detailed site map with well locations and casing elevations must be submitted to \_\_\_\_\_

10. NOTICE IS HEREBY GIVEN OF THE FOLLOWING:

- a. Review by the Department of well locations and depths is limited solely to review for compliance with the law and Department rules;
- b. The Department does not review well locations or depths to ascertain the presence of, nor the potential for, damage to any pipeline, cable or other structures;
- c. The permittee (applicant) is solely responsible for safety and adequacy of the design and construction of well required to be constructed by the Department;
- d. The permittee (applicant) is solely responsible for any harm or damage to person or property which results from the construction or maintenance of any well; this provision is not intended to relieve third parties of any liabilities or responsibilities which are legally theirs.

ADDITIONAL REQUIREMENTS (IF CHECKED):

- ☒ 1. Split Spoon Samples (In Overburden) AS REQUIRED IN SCOPE OF WORK
- ☒ 2. Rock Core Samples OPTIONAL
- ☒ 3. Dedicated Bailer (Sampler) in Well(s) OPTIONAL
- ☐ 4. Borehole Geophysical Log(s) \_\_\_\_\_
- ☒ 5. Other DRILLER MUST BE LICENSED AS PER NJSA 58:4A et seq

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\* OTHER DRILLING METHODS, MATERIALS, DESIGNS AND CASING DIAMETERS MAY BE USED WITH PRIOR APPROVAL BY NJDEP.